REMARKS

The Office Action dated April 22, 2005 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto. Claims 1-53 are submitted for consideration.

The Office Action indicated that claims 14-17 and 48-49 would be allowable if rewritten in independent form. Applicant wishes to thank the Examiner for indicating the allowability of claims 14-17 and 48-49. However, based on the arguments presented below, Applicant respectfully requests that all of the presently pending claims be allowed.

Claims 1-3, 4-6 and 9-10 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,172,986 to Watanuki et al. According to the Office Action, on page 2, paragraph 4, Watanuki et al. discloses all of the elements "with respect to claims 1-10, 18-18, 21-25, 27-29, 33 and 34-35." However, the Office Action did not state the section of U.S. Patent law under which claims 1-10, 18-18, 21-25, 27-29, 33 and 34-35 were rejected. Although for the purpose of this Response, the Applicant intends to treat the rejection of claims 1-10, 18-18, 21-25, 27-29, 33 and 34-35 as an anticipation rejection, Applicant requests that the Examiner issue a new non-final Office Action that indicates the proper grounds of each rejection. This rejection is traversed as being based on a reference that neither teaches nor suggests the novel combination of features clearly recited in independent claims 1, 18, 22 and 29.

Claim 1, upon which claims 2-17 depend, recites a method for efficient routing of

mobile node packets. The method includes the steps of moving a mobile node from a first location to a second location, the second location being outside a home address of the mobile node and sending a configuration message from a mobile node along a path to a second node. The method also includes the steps of sending a confirmation message from the second node along the path to the mobile node, the confirmation message reserving resources in nodes in the path for a flow from the mobile node and sending the flow containing at least one packet from the mobile node to the second node along the path. The method further includes the steps of classifying the flow by each node in the path based on a home address option in each at least one packet and routing the flow by each node in the path, each node in the path using the reserved resources associated with the flow based on the classification.

Claim 18, upon which claims 19-21 depend, recites an article including a storage medium having instructions stored therein. The instructions when processed causes a router to perform receiving configuration information that configures the router to classify a received flow based upon a home address option in a destination option header of a packet in the flow if the address is present and reserving resources in the router for a flow based on receipt of a message. The router also performs receiving the flow, the flow containing at least one packet, classifying the flow by the router based on the destination option header in each at least one packet, and routing the flow by the router, the routing using the reserved resources associated with the flow based on the classification.

Claim 22, upon which claims 23-28 depend, recites a network including at least

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one first node, at least one second node and at least one router. Each at least one router is configured to classify a received flow based upon a home address option in packets in the flow if the address is present. One at least one first node sends a flow including at least one packet to one at least one second node, at least one router reserving resources in the router for the flow based on receipt of a previous message, the at least one router classifying the flow based on the home address option in each at least one packet, and routing the flow using the reserved resources associated with the flow based on the classification.

Claim 29, upon which claims 30-35 depend, recites a router including a reservation module for reserving resources for a flow in response to receipt of a message from a second node and a receiving module for receiving the flow including at least one packet. The flow originates at a first node and having a destination of the second node. The router also includes a classification module for classifying the received flow based upon a home address option in the at least one packet in the flow if the address is present and a routing module for routing the received flow using the reserved resources associated with the flow based on the classification.

As will be discussed below, the cited prior art reference of Watanuki et al. fails to disclose or suggest the elements of any of the presently pending claims.

Watanuki et al. teaches a network system which includes a first LAN that uses both IPv4 and IPv6, a second LAN that uses only IPv4 and a WAN which connects the two LANs. The first LAN includes an IPv4 node, an IPv6 node, IPv4/v6 mobile node, an

IPv4 mobile agent and an IPv6 mobile agent. The IPv4 mobile agent assists the movement of a node using IPv4 protocol between the networks and the IPv6 mobile agent assists the movement of the node executing IPv4 and/or IPv6 between the networks. Col. 8, lines 46-64. The IPv4/v6 mobile node includes a movement processing portion for executing various processing when the node moves, a movement detection processing portion for executing a detection process which detects movement to another network, IPv4 and IPv6 movement registration processing portions for executing a respective movement notification process which notifies the appropriate mobile agent when the node moves to another IPv4, IPv6 or IPv4/v6 network, a movement status management table for managing movement status, and processing portions for executing a process in accordance with the service offered by IPv4 and IPv6. Col. 9, lines 15-40.

As shown in figure 5 of Watanuki et al., the IPv4/v6 mobile node transmits a transmission request message for detecting IPv4/IPv6 movement. The message requests an IPv4/IPv6 movement detection message when the node moves to another IPv4, IPv6 or Ipv4/v6 network. The associated mobile agent transmits the transmission detection message to the mobile node. When the movement detection message is received, the network address of the network to which the mobile agent belongs is compared with the post movement network address. If there is a match, the IPv4 or IPv6 movement registration processing is executed. Col. 11, line 27 – Col. 12, line 17. During the movement registration process, as illustrated in figure 6, the IPv4 address on a foreign

network is acquired and the IPv4 movement registration request message is transmitted to the IPv4 mobile agent and a table is updated.

Applicant submits that Watanuki et al. simply fails to teach or suggest each of the elements of claims 1, 18, 22 and 29. The Office Action states that Watanuki et al. teaches sending a confirmation message from the second node along the path to the mobile node, the confirmation message reserving resources in nodes in the path for a flow from the mobile node as recited in claims 1, 18, 22 and 29. The Office Action alleged that the movement registration permission message of Watanuki et al. is the same as the confirmation message of claims 1, 18, 22 and 29. However, Applicant submits that the movement registration permission message of Watanuki et al. is shown in figures 13 and 14 to include only the mobile node's IPv6 address the foreign IPv6 address and the foreign IPv4 address, in addition to an IPv4 header. To equate the movement registration permission message of Watanuki et al. with the confirmation message of the present invention, the Office Action further alleged that "resources are defined as at least the packet length difference between IPv4 packets and IPv6 packets, and, a header is added to the header containing the home and foreign addresses." However, as shown in figure 8 of Watanuki et al., the IPv4 encapsulated IPv6 movement registration permission message of figure 14 is simply used to show the translation between IPv4 and IPv6 protocols. As such, Applicant submits that there is no teaching or suggestion of <u>reserving</u> resources as recited in claims 1, 18, 22 and 29 of the present invention. Furthermore, the Office Action alleged that in the step of classifying that each node as recited by claims 1,

18, 22 and 29 is taught by Watanuki et al. as the mobile agents. However, this does not make sense since there are no resources in the mobile agents to reserve.

Claims 1, 18, 22 and 29 further recite classifying the flow by each node in the path based on a home address option in each of the at least one packet and routing the flow by each node in the path, each node in the path using the reserved resources associated with the flow based on the classification. As noted above, the Office Action alleged that the mobile agents of Watanuki is the same as the nodes recited in claims 1, 18, 22 and 29 and that Watanuki et al. teaches routing the flow by each node in the path, each node in the path using the reserved resources associated with the flow based on the classification. However, as presented above, the encapsulated movement registration permission message does not reserve any resources as suggested by the Office Action. Therefore, Applicant submits that there is no teaching or suggestion in Watanuki et al. of routing the flow by each node in the path, each node in the path using the reserved resources associated with the flow based on the classification as recited in claims 1, 18, 22 and 29. Based on the deficiencies of Watanuki et al., as outlined above, Applicant respectfully asserts that the rejection presumably under 35 U.S.C. §102(e) should be withdrawn because Watanuki et al. fails to teach or suggest each feature of claims 1, 18, 22 and 29 and hence, dependent claims 2-10, 19, 21, 23-25, 27-28, 32 and 34-35 thereon.

Furthermore, on page 4, the Office Action alleged that Watanuki et al discloses all of the elements with regard to claims 36-39. Similarly, the Office Action did not state the section of U.S. Patent law under which claims 36-39 were rejected. Similarly, for the

purpose of this Response, the Applicant intends to treat this rejection of claims 36-39 as an anticipation rejection. Nevertheless, as noted above, Applicant requests that the Examiner issue a new non-final Office Action that indicates the proper grounds of each rejection. This rejection is also traversed as being based on a reference that neither teaches nor suggests the novel combination of features clearly recited in independent claim 36, upon which claims 37-39 depend.

Upon review of Watanuki et al. there is no teaching of sending a first message along a second path to the second node, the second path including one at least one node in the first path as recited in claim 36. The Office Action suggests that Watanuki et al. teaches that the movement transmission request message is sent from the mobile IPv4/v6 node to mobile agent 108 along a second path that includes mobile node 104. However, figure 1 of Watanuki et al. shows that node 104 is in LAN-a and that mobile agent 108 is in LAN-b. As such, there is no teaching or suggestion in Watanuki et al. that the second path includes mobile node 104 as suggested by the Office Action. Furthermore, claim 36 recites, in part, that the second message triggers the sending of a third message from at least one of the second node and the at least one node to the mobile node, the second message triggering a mapping between a home address and a temporary address of the mobile node in each of the at least one node in the second path. Applicant submits that the Office Action is incorrect in equating comparing the network address of the IP mobile agent to the post movement network address, as taught in Watanuki et al., with triggering the sending of a third message as recited in claim 36. Therefore, Applicant respectfully

asserts that the rejection presumably under 35 U.S.C. §102(e) should be withdrawn because Watanuki et al. fails to teach or suggest each feature of claim 36 and hence, dependent claims 37-39 thereon.

Claims 11-13, 20, 26, 30, 40, 44, 46-47, and 50-53 were rejected under 35 U.S.C. 103(a) as being unpatentable over Watanuki et al. as applied to claims 1-10, 18-18, 21-25, 27-29, 33 and 34-35, and in further view of RSVP Support for Mobile IP version 6 in wireless environments (RSVP Support). The Office Action states that Watanuki et al. teaches the network system of claims 1, 18, 22, and 29. According to the Office Action, Watanuki et al. does not teach a RSVP router as recited in claims 11-13, 20, 26, 30, 40, 44, 46-47, 50-53. The Office Action also states that Watanuki et al does not disclose that the first message comprises a binding update message as recited in claim 42 and that the second message comprises a CoA advertisement RSVP message as recited in claim 43. However, the Office Action cites RSVP Support as curing these deficiencies and states that it would have been obvious to combine the teachings of Watanuki et al. and RSVP Support to yield the claimed invention. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in independent claims 1, 18, 22, 29 and 36, upon which each of claims 11-13, 20, 26, 30, 40, 44, 46-47, and 50-53 depend.

RSVP Support focuses on issues of MIPv6 and RSVP interoperability in the operation phase where optimized routing between fixed and mobile hosts is used. RSVP Support simply does not cure any of the deficiencies of Watanuki et al. as outlined above.
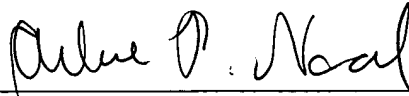
Therefore, Applicant respectfully asserts that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Watanuki et al. nor RSVP Support, whether taken singly or combined, teaches or suggests each feature of claims 1, 18, 22, 29 and 36 and hence, dependent claims 11-13, 20, 26, 30, 40, 44, 46-47, and 50-53 thereon.

As noted previously, claims 1-53 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 1-53 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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